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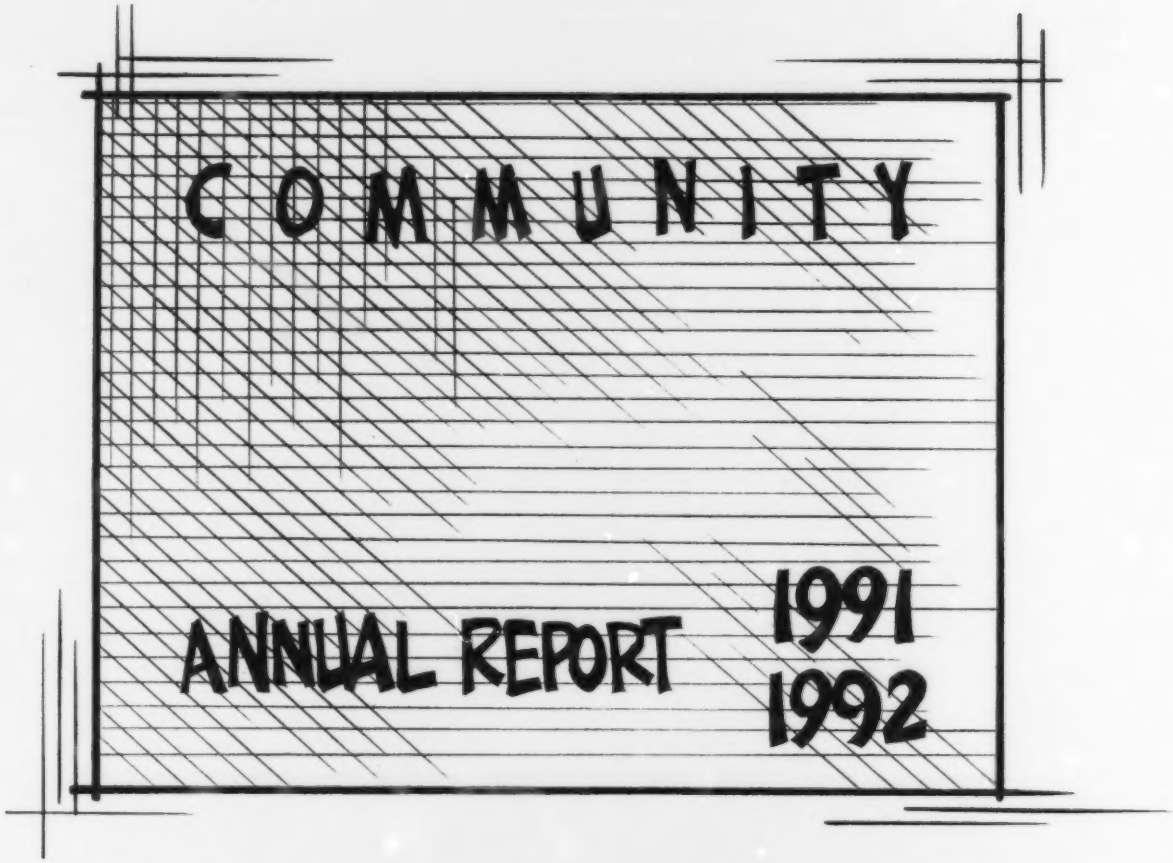
HALIFAX
HARBOUR
CLEAN
INC.



ABOUT THE CORPORATION

Halifax Harbour Cleanup Incorporated (HHCI) is a crown corporation funded by the Government of Canada, the Province of Nova Scotia and the municipalities of Dartmouth, Halifax and Halifax County. The corporation was established in July 1989 to design and build a regional system of sewage collection, treatment and disposal.

OUR ENVIRONMENTAL GOAL

To prevent raw, untreated sewage from entering Halifax Harbour, thereby removing a chronic source of environmental degradation of the harbour.

MESSAGE FROM THE PRESIDENT

For over 200 years, people living and working around Halifax Harbour have dumped their waste into it. We still dump 100 million litres of raw sewage into the harbour every day. Halifax Harbour Cleanup Inc. (HHCI) was created as the result of an overwhelming consensus in the community that we need to deal with this problem. Our goal is to build a regional sewage treatment system that will serve the community for generations to come.

In 1991/92, we made significant progress toward the realization of that goal. After consulting with the public, HHCI's Board of Directors announced that Ives Cove, north of McNabs Island, was the recommended site of the new sewage treatment facility. This recommendation will now go through the Joint Federal/Provincial Environmental Assessment Review. Throughout the summer and fall of 1991, consultants from Jacques Whitford Environment Limited conducted extensive environmental investigations of the project. Their report will be released to the public later in the summer and the Panel will organize public hearings for late fall.

As our fiscal year drew to a close, Metro Engineering Inc. had made significant progress on the pre-design of the project. For the first time, we had a conceptual view of how the sewage treatment system will work, what it will look like and a realistic estimate of cost, expressed in tomorrow's dollars. We made these preliminary plans public through a newspaper supplement and community presentations.

A project of this magnitude is bound to create much discussion, debate, and at times, controversy. The debate over what to do about harbour pollution has been chronicled by the incisive cartoons of Bruce MacKinnon, editorial artist with The Chronicle-Herald. For the staff of six at HHCI, these cartoons often gave new meaning to the phrase "It only hurts when we laugh." In the heat of controversy, Mr. MacKinnon's cartoons made us all laugh and helped put the issue into perspective. For both those reasons, we have included his work in this report.

"In the heat of controversy, Mr. MacKinnon's cartoons made us all laugh and helped put the issue into perspective."

Maintaining the proper perspective is one of the greatest challenges we will face as a community. HHCI's Board of Directors has instructed the engineers, planners, architects and environmental consultants to design and plan for the long term. We will need to remind ourselves of the magnitude and critical importance of what we are trying to achieve, and how the decisions we make today will affect the generations that follow. Our success as a community and as a corporation depends on it.

Sincerely,

Paul Calda, P.Eng.
President

SITE FOR TREATMENT PLANT ANNOUNCED

HALIFAX, May 6, 1991 – Halifax Harbour Cleanup Inc.'s Board of Directors announced today that it recommends an infilled island be constructed at Ives Cove, north of McNabs Island, to house Metro's proposed regional sewage treatment facility. "The site was the board's clear choice after reviewing the evaluation results of the five choices put forward by the Halifax Harbour Task Force and the concerns expressed by the citizens of the area," said HHCI president, Paul Calda.

HHCI conducted a feasibility study of each of the five areas proposed by the Halifax Harbour Task Force and then solicited input through public meetings, a public comment phone line, and written comment sheets. The corporation then devised the criteria which it would use to evaluate the sites. "After weighing all the factors," said Paul Calda, president of HHCI, "which included potential environmental impacts, cost and design considerations, and the community's clear desire to avoid residential areas while treating the sewage problem in its own backyard, Ives Cove was clearly the best choice."

The 9.3 hectare, infilled island will be part of the proposed sewage treatment system. It will undergo a joint federal/provincial environmental assessment. A small gravel spit off Ives Point will be removed to create a channel between McNabs and the new island. The channel, measuring 30 metres at its narrowest point, will encourage the development of marine life and vegetation. The island will be landscaped with trees and shrubbery and contoured to blend in with its surroundings.

Sandwich Point was the first site recommended for the regional sewage treatment plant. These plans were aborted in 1988 after an evaluation by the Nova Scotia Environmental Control Council.

HHCI ANNOUNCES SITE FOR OUTFALL AND DIFFUSER

HALIFAX, Nov. 9, 1991 – A site for the main outfall and diffuser, which will disperse the treated wastewater into the harbour, has been identified. "We are examining a site west of Ives Knoll which will not interfere with harbour anchorage sites," said Terry Simms, HHCI's senior engineer.

At the recommendation of the Halifax Harbour Task Force, HHCI applied to the Halifax Port Corporation for permission to locate the diffuser northeast of Georges Island. However, permission was denied under the Navigable Waters Protection Act because a diffuser near Georges Island would interfere with seven Halifax Harbour anchorage sites. "Because anchors can drag for several hundred meters, they could easily destroy the diffuser and possibly affect safety in the area," said Simms. He added that the new diffuser site can easily be incorporated into HHCI's plans, and still abides by the Task Force's recommendation to locate the diffuser within the Inner Harbour.

CONSULTANTS COMPLETE ENVIRONMENTAL STUDIES

HALIFAX, October, 1991 – Jacques Whitford Environment Limited (JWEL), environmental assessment consultant to HHCI, has completed its studies of the potential environmental and community impacts of building and operating the proposed sewage treatment system. "The sewage treatment system will ultimately improve the environment, but we must know what the existing conditions are to measure the impact," said Earle

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97 PERCENT SAY YES TO SEWAGE TREATMENT

HALIFAX, December, 1991 – In a public opinion poll conducted by Omnifacts Research Ltd. for Halifax Harbour Cleanup Inc., 97 percent of those surveyed felt it was somewhat (10%) or very (87%) important to have a new sewage treatment system constructed.

Pollution in Halifax Harbour was by far the single most important environmental issue mentioned by respondents. Forty-one percent mentioned it as the most important issue, followed by solid waste/incineration (24%) and water pollution in general (7%). No other problem accounted for more than 4% of the responses.

Regarding the selection of the Ives Cove site adjacent to McNabs Island, 9% thought it was an excellent recommendation, 45% thought it was a good choice, 20% thought it was fair, while 18% thought it was a poor recommendation.

When asked if they approved of the job HHCI has done to date, 39% approved while 23% disapproved. The rest felt they did not have enough information to evaluate the corporation's performance. Of those that disapproved, the most common reason given was that the work was not moving forward fast enough.

Two-thirds of the respondents (65%) indicated that they were interested in learning more about the development of the new sewage treatment system for Halifax Harbour.

HHCI's semi-annual public opinion survey is part of an ongoing public information and involvement program. In the fall of 1991, the corporation launched a quarterly newsletter which is mailed to approximately 1,500 interested individuals. In addition, HHCI held a series of public meetings in Herring Cove and Purcell's Cove to discuss sewage treatment options with those residents. HHCI staff regularly participate in displays and environmental exhibits in the metro area and speak to community groups about the project.

The corporation continues to operate a public comment telephone line and launched a radio public service announcement campaign to encourage people to call for more information and to express their views. HHCI also produced a four-page newspaper supplement distributed in the two metro dailies which gave a comprehensive overview of plans for the proposed sewage treatment system. As well, the corporation took the plans to community groups through a series of presentations which were given to interested individuals and groups in the spring.

CONSULTANTS COMPLETE ENVIRONMENTAL STUDIES

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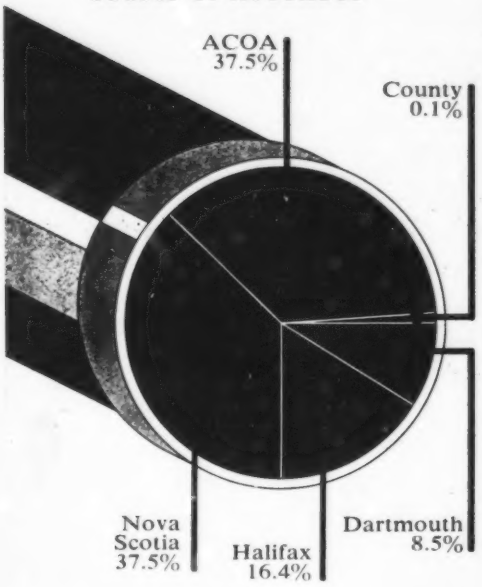
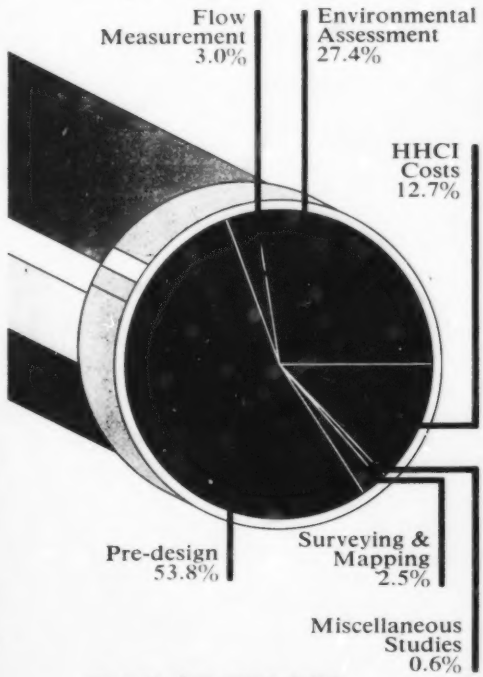
Hickey, project manager for the environmental assessment. Using the expertise of many other local consultants – marine and terrestrial biologists, engineers, physical oceanographers, chemists and landscape architects – JWEL conducted studies of air quality, water quality and wildlife, the local fishery, tourism, traffic patterns, noise, odour and the visual and recreational environment. In addition, they conducted archaeological studies of Halifax, Dartmouth, McNabs Island and the surrounding marine region. "These studies give us a picture of what is happening now. With this information, the environmental assessment team can then predict impacts, and see where we can avoid or minimize any adverse ones," said Hickey. JWEL will use this information when writing the environmental assessment report, slated to become public in late August 1992.

FINANCIAL HIGHLIGHTS 1991–1992*

Source of Revenues



Expenditures



Total=$7,773,235

* For a copy of Halifax Harbour Cleanup Incorporated's Financial Statements, please call 422-0002.

THE COST O

By December 1991, the pre-design of the proposed regional sewage treatment system had reached the point where HHCI was able to develop a preliminary estimate for the project. On 7 January, 1992, the Honourable Joel Matheson, Minister responsible for HHCI, announced that the projected costs for the cleanup were $425 million.

These costs reflect what it will cost to build a system that is scheduled for completion in 1999, taking into consideration the rising cost of labour and materials.

Following the announcement, a number of civic and political leaders expressed concern over what seemed a dramatic escalation in the cost from earlier estimates of $195 million.

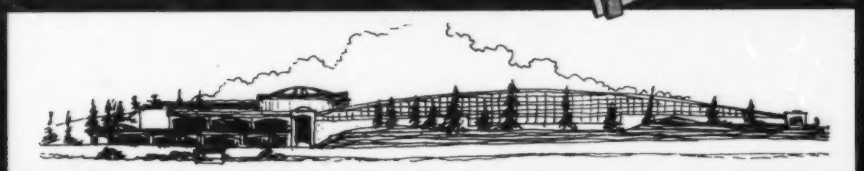
The original costs for the project, however, were developed over two years ago when there were plans to locate a sewage treatment facility at Sandwich Point. These plans were aborted after being evaluated by the Nova Scotia Environmental Control Council. The results of the evaluation suggested that there were significant gaps in information about Halifax Harbour and its uses. Plans at that time were preliminary and did not have the benefit of the extensive 18-month study of the harbour conducted by the Halifax Harbour Task Force.

Today's proposal is the result of more detailed information, a clear philosophy of responsible waste management and stated long-term water quality objectives. The proposed system is being designed to meet long-term environmental needs and to minimize ongoing operating and maintenance costs so that we do not pass on a huge burden to our children.

Here's how the total breaks down:

Sewage Treatment Plant

$136.3 million



The plan is to construct a primary sewage treatment facility, using the most advanced treatment technology, on a 9.3 hectare island at Ives Cove near McNabs Island. Costs also include building an infilled island and developing the site to be an efficient, attractive and environmentally pleasing addition to the harbour. Along with the sewage treatment facility, the site will house the necessary administrative buildings and an oil-from-sludge plant.

CLEANUP

Interceptor Tunnels, Pumps and Outfall

$243.9 million

The collection and pumping system is the largest project cost. Today there are approximately 40 outfalls which empty 100 million litres of raw sewage into Halifax Harbour every day. These outfalls will be consolidated and a tunnel constructed around the edge of Halifax Harbour to intercept the sewage before it enters the water. It will then go to the sewage facility at Ives Cove for treatment. In addition, sewage from Halifax Mainland South and Herring Cove, which is currently pouring into Watley's Cove, will be pumped via a force main back toward the regional sewage facility for treatment.

Environmental Assessment

$3.0 million

Before the project is approved by the federal and provincial environment ministers, it will undergo a joint federal/provincial environmental assessment which will include public hearings around the community.

Several studies determining possible negative environmental and community impacts of the project have been conducted and a full report will be released to the public in late summer 1992.

Halifax Harbour Cleanup Inc.

$14.6 million

Halifax Harbour Cleanup Inc. (HHCI) is a crown corporation charged with managing the design and construction of the regional sewage treatment system. The corporation has a specific short-term (approximately seven years) mandate. Once the sewage treatment plant is constructed, the operation of the plant will become the responsibility of the municipalities.

Goods and Services Tax

$26.8 million

This is clearly the largest and most significant community project to be undertaken this century. When the initial estimate was developed, the GST did not exist. Today it accounts for 6.3 percent of the total cost.

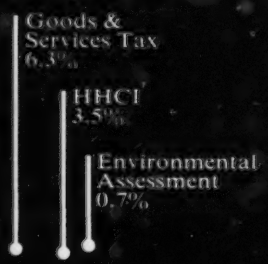
Total Expenditure

$425 million

Who Will Pay?

The project is funded by a cost-sharing arrangement between the federal, provincial and municipal governments. Homeowners and businesses are already contributing directly to the project through pollution control charges on their water bills. Everyone pays according to the amount of water they use.

Total Expenses



PROPOSED SEWAGE TREATMENT SYSTEM TAKES SHAPE

HALIFAX, March, 1992 – As the pre-design of the regional sewage treatment system reached the halfway mark, engineers and architects of Metro Engineering Inc., the firm contracted to conduct the project's pre-design, presented the first conceptual drawings of the Ives Cove island and sewage treatment facility.

A team of local engineers, architects and environmental planners collaborated to develop the initial concepts for the sewage collection system and treatment plant. In the spirit of the Halifax Harbour Task Force recommendations, HHCI is recommending a primary sewage treatment system that will be an integral part of the harbour environment.

"We were instructed by HHCI's Board of Directors to design for the long term," said Cyril Allan, project manager with Metro Engineering. "They told us that the system must be designed to meet the needs of the community until at least the year 2041. Care must be taken in the design and construction today so that we do not pass on huge operating and maintenance costs and headaches to our children and grandchildren."

In addition, the design team was asked to meet other challenges. The sewage treatment facility must be an attractive addition to the harbour. Because it will be adjacent to an island park, it must blend in with its surroundings without detracting from the natural beauty of McNabs Island. It must be able to cost-effectively accommodate more advanced treatment levels should they become necessary. "This sewage treatment system will not be hidden in someone else's backyard but will be an integral part of the community it serves," said Mr. Allan. "What is important to remember is that this is not an industrial project, but a project that will ultimately protect and improve the environment. We have a splendid opportunity here to alleviate the sewage problem in Halifax Harbour, while at the same time building a very unique facility which will perhaps become renowned as a prime example for other communities."

The proposed island will be about nine hectares, slightly larger than the area of Georges Island. It will follow the slopes and contours of McNabs Island, rising approximately 12 metres above sea level. The island will be large enough to accommodate primary treatment and its eventual expansion, either to meet the needs of a larger population or to introduce more advanced levels of treatment. In the meantime, architects are proposing that the unused land house a freshwater pond to permit irrigation of trees and shrubbery.

Armour stone and the island's shape will prevent erosion and allow the island to withstand storm waves of up to four meters. The plant itself will be nestled in among the trees. The roof, which will extend five meters above the tree line, will carry on the natural curved shape of the island. Environmental standards require that exhaust coming from the oil-from-sludge facility go through a stringent purification process. Cooled and purified air is vented through the side of the building, removing the need for a smokestack.

The building configuration will include the treatment facility itself, a pumping station, an administration building and an oil-from-sludge processing facility. The plant will be completely enclosed, which will contain any odours resulting from the treatment process.

HHCI RECOMMENDS OPTION FOR HERRING COVE/MAINLAND SOUTH

HALIFAX, Feb. 18, 1992 – The HHCI Board of Directors announced today its recommendation for treating sewage flowing from Halifax Mainland South and Herring Cove into the harbour. A direct tunnel route from Roach's Pond to the Halifax Peninsula with a force main from Herring Cove to Roach's Pond will transport the raw sewage from these two areas to the regional sewage treatment plant at Ives Cove.

In November, 1991, HHCI staff and consultants met with the communities of Herring Cove and Mainland South to

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SEWER FLOW GAUGING MEASURES 100 MILLION LITRES A DAY

HALIFAX, March, 1992 – Flow gauging studies recently completed by HHCI have provided up-to-date information on the type and amount of pollution that flows daily into the waters of Halifax Harbour.

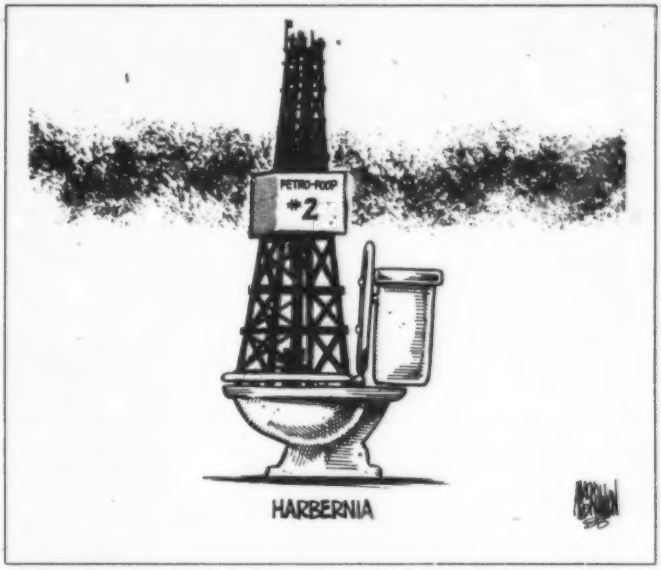
"These studies were extremely vital because we had previously been working with theoretical numbers, developed over the past 20 years and based on national experience," explained Terry Simms, HHCI senior engineer. "Few specific tests have ever been done in this area. So what we have now are actual figures which will form the basis of our project's design."

Throughout the past year, HHCI consultants gauged and sampled 10 of the major existing sewer outfalls – representing approximately 70 percent of the sewage outflow entering the harbour – and determined once and for all the quantity and quality of the pollution being dumped into metro's harbour.

The studies confirmed that approximately 100 million litres of untreated sewage flow into Halifax Harbour every day – roughly enough to fill 40 Olympic-size swimming pools.

Laboratory analyses of samples revealed that the sewage is diluted due to ground water infiltration and surface drainage.

These studies will enable HHCI and its consultants to define the scope of the sewage collection and treatment system needed to stop the flow of untreated sewage into Halifax Harbour.



The nickname "petro-poop" came from plans to process sludge – the by-product of sewage treatment – into a low-grade petroleum product via an oil-from-sludge plant.

SEWAGE OUTFALL PROGRAM TO START

HALIFAX, March 31, 1992 – An $11 million program to reduce the number of sewage outfalls into Halifax Harbour from about 40 to 17 in anticipation of the Halifax Harbour cleanup is slated to begin this summer. "This work is necessary if we ever plan to eliminate the discharge of 100 million litres of raw sewage into our harbour daily," said Paul Calda, president of HHCI.

The work, known as the street sewer consolidation program, is expected to create 213 direct and indirect jobs and take a year to complete. It is similar to previous sewer improvements done by local municipalities and falls outside the environmental review being done on the overall cleanup.

The harbour's outfalls will be consolidated into eight Halifax waterfront outfalls and seven Dartmouth waterfront outfalls. Doing that work now will knock about $2 million off the cleanup's final cost, said Mr. Calda.

HHCI RECOMMENDS OPTION FOR HERRING COVE/MAINLAND SOUTH

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discuss the options for collecting and treating sewage being discharged into the harbour from those areas. During these discussions, which included meetings with community leaders and representatives as well as three public meetings, a total of nine options surfaced.

After a preliminary assessment of costs, engineering considerations and environmental impacts, the HHCI Board of Directors chose to advance the direct tunnel route for full environmental assessment. "This option will remove any overflow into the McIntosh Run," said Terry Simms, senior engineer for HHCI, "and we believe it will have minimal impact on the citizens in the area." The option will be included in the environmental assessment report planned for release to the public in late summer 1992.

"In protecting our oceans we humans are breaking the bad polluting habits, not just of a lifetime, but of the entire span of human existence on the planet."

- Arthur Campeau
Special Advisor to Federal Environment Minister, as cited in the Halifax Chronicle Herald, 8 May, 1991.

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President & Chief Executive Officer, Halifax Harbour Cleanup Inc